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Hierarchical Structures: Conducive or Barrier to Knowledge Management?

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ABSTRACT

This study examines managers' perceptions of Knowledge Management (KM) prior to implementation of KM-systems in a global insurance company and investigates whether Hierarchical structures are conducive to KM. Mixed methods are used, combining large scale surveying and case study using content analysis to organize the data into themes that provide the basis for arguments. Evidence suggests that managers strongly align their perception of KM with communication. Despite a multi-layered, hierarchical structure and strong middle management presence, organizational structure was not viewed as an issue. These factors are usually barriers to communication and organizational flexibility, yet managers believe that they may not inhibit KM becoming fully embedded. This evidence is contradicted by the results of a global KM study where silos, stovepipe and hierarchical structures were commonly cited as barriers. This contributes to the understanding of managerial mis-conceptions of knowledge as opposed to communication, and how organizations effectively share knowledge.

Keywords

Managers' perceptions, Barriers, Hierarchical structure, Organizational structure, Communication.

INTRODUCTION

KM-systems are "a class of information systems applied to managing organizational knowledge. ... they are IT-based systems developed to support and enhance the organizational processes of knowledge creation, storage/retrieval, transfer and application" (Alavi and Leidner 2001, p. 114). There are specific tools and types of applications considered to be essential in enabling KM such as (Devedzic, 2001): intelligent agents, databases, data mining, browsers, decision support, document retrieval and knowledge based systems. There is a significant amount of research about the ability of IT systems to deliver knowledge management. A comprehensive study was conducted by Gill (1995) who found that knowledge systems were not implemented successfully because of economic or technical reasons and were more likely to be unsuccessful because of organizational and managerial issues - the human element. This view is supported by McDermott (2000) who argues that IT has inspired KM, but cannot deliver it.

Akhaven, Jafari, and Fathianl (2005) identified the following reasons as the main failure factors for a KM-system:

- "Lack of top management commitment and support";
- "Improper selection of a knowledge team leader and members";
- "Improper planning";
- "Lack of separate budget for a knowledge management project";
- "Organizational culture";
- "Lack of cooperation between team members";
- "Employees and resistance to change".

Riege (2005) argues that knowledge-sharing initiatives can be successful if communicated by management at all levels. Managers must recognize the need to operate the business strategy and KM in parallel and recognize the challenges regarding technology, people and the organization. Other success factors, such as staff recognizing the value in KM, stem from management and their approach to KM. Management should possess an open attitude to knowledge and see

knowledge as a resource creating an environment for KM to be encouraged. Managers must put in place an effective change management plan to aid the success of an initiative (Davenport, De Long, and Beers, 1998).

McDermott (2000) suggests leveraging knowledge can be achieved by creating communities that work across teams, disciplines, time, space and business units. This could be interpreted as an organizational structure element to KM. Structural characteristics of organizations, which in part are developed by the views and attitudes of senior management (Senior and Fleming, 2006), can help or hinder a KM initiative. Drucker (1998) asserts companies with complex layered structures can be barriers to communication.

The case study company presented here (CA) operates globally in insurance and assistance services. The company relies on technological innovation and superior client relationships as a differentiating factor to achieve competitive advantage. CA was in the early stages of a phased implementation plan for a global KM initiative using an intranet platform. The intranet architecture was being piloted in select business divisions, aiming to share new efficiencies and increase competitive advantage.

Research Aim & Objectives

Unless there is understanding and support from senior managers for the aims of a KM program, the probability of success was likely to be limited. From the literature review, risk factors and areas for investigation were identified that were also observable at CA. The purpose of this study was to determine CA managers' current views and perspectives of KM and how the existing organizational structure may or may not support KM. Thus the research questions are:

- What are CA's managers' perceptions and understanding of KM?
- What are seen as the existing barriers to a KM initiative in CA?
- How might CA's organizational structure affect a KM program?
- How might a KM program affect CA's organizational structure?
- What may cause resistance to KM in managers?
- Does the purpose of the intranet match the expected requirements of CA's managers for KM?

The research questions were developed to achieve the objectives of the study which are to:

- Determine the perceived benefits of a KM program from managements' perspective
- Identify the perceived issues and barriers with implementing KM program
- Determine if the purpose of the intranet was aligned with CA's UK managers' expectations

It was expected that this research will uncover views and perceptions from managers working at CA's towards KM. It will help determine if organizational structure is conducive to a KM initiative being introduced.

KNOWLEDGE MANAGEMENT

Knowledge management has been the subject of significant academic research and attempts to define KM have been numerous (e.g. Carrillo, Anumba and Al-Ghassani, 2005; Davenport and Prusak, 1998; Robinson, Swan, Scarbrough, and Preston, 1999). This could, in part, be related to the difficulty researchers have in coming to a consensus on the definition of knowledge itself.

The following definition was chosen for this study as it emphasizes the employee, a key source of organizational knowledge and recognition of the organizational specificity of knowledge. KM is "a systemic and organizationally specified process for acquiring, organizing, and communicating both tacit and explicit knowledge of employees so that other employees may make use of it to be more effective and productive in their work" (Alavi and Leidner, 1999, p.6). It is apparent that there is no 'one size fits all' solution to adopting or implementing KM - KM was not a method which can be standardized, structured and prescribed to any organization (Johannessen and Olsen, 2003).

Human Factors and Knowledge Management

A significant amount of the early focus on KM was information communication technology led. However, powerful human factors are critical success factors for KM. The basic tenant of organizational knowledge is that it is held by people not databases. Scarborough and Swan (1999) assert that IT systems are often low level methods of knowledge-sharing and the most common form of knowledge transfer is direct communication. This recognizes the difficulty in sharing tacit knowledge through any medium because knowledge is the result of information and experience being acted on (Hicks, Dattero and Galup, 2006).

People management practices are able to facilitate environments where staff that have high tacit knowledge are retained and encouraged to share knowledge. Encouragement in a work setting usually accompanies rewards or incentives. Du Plessis (2007) extends the conventional view of reward and incentive to include 'push' and 'pull' incentives. 'Push' rewards include KM linked to performance appraisals. 'Pull' incentives link reward to using knowledge for organizational innovation and increasing employee recognition within the company.

Managerial Influence on Knowledge Management Initiatives

In every organization, a key role for leaders is setting an example for employees to follow (Singh, 2008). It is safe to assume that leaders will have direct impact on organizational KM initiatives and processes. Stewart (1997) argues that even companies that have sound incentive programs for KM initiatives and cultures suited to KM will fail to succeed without having dedicated, responsible managers. Lakshman (2007) argues that the leaders' role begins with personal understanding and realization of the importance of KM to organizational performance. Leaders can exist in all areas of an organization and not all leaders are senior managers. Middle managers play an important role in mediating relationships between senior managers and staff (Singh, 2008). Managerial influence at CA was particularly strong because of the hierarchical nature and heavy middle management presence.

Communication and Knowledge Management

Clear and well directed communication is important in change management. Ideally communication planning should be specific to the groups' for whom KM is intended (Albers, 2009). Employees must be informed that KM can greatly enhance personal success as well as that of the company (Du Plessis, 2007). By neglecting to communicate the benefits KM advocates will struggle to effect cultural change, which is important for KM success (Albers, 2009; Du Plessis, 2007; McDermott, 2000). Apart from email and the annual general staff meeting, no mechanisms are in place to cohesively communicate to all staff members at CA. While the introduction of the intranet will help fill this gap, prior to its implementation the vision, benefits and aims needed to be communicated to all staff.

Care must be taken when introducing KM as it could be perceived as giving management greater control. This could be counterproductive to the aim to encourage freedom and sharing of knowledge (Scarborough and Swann, 1999). The effect could harm an existing culture of communication, instead of facilitating that culture. Albers (2009) asserts that the ideal culture is characterized by trust, openness, risk-taking, teamwork, collaboration, autonomy, and time for learning.

Organizational Structure to Support Knowledge Management

Typically, an organizational structure is created by management for a specific purpose (Senior and Fleming, 2006). Organizational structure can be defined as:

"The structure of an organization is the formal way of identifying who is to take responsibility for what; who is to exercise authority over whom; and who is to be answerable to whom. The structure is a hierarchy of managers and is the source of authority, as well as the legitimacy of decision and actions" (Stacey, 2003, p. 62).

This definition recognizes organizations' need to develop their structures around a specific purpose. Organizational design is an influential factor relative to the implementation process of KM (Claver-Cortes, Zaragoza-Saez and Pertusa-Ortega, 2007). Drucker (1992) argues that organizations should be ready to decentralize in order to make knowledge work more effective and decisions quicker. Drucker (1992) infers that an organic organizational structure is suited to KM. Organic characteristics include a limited amount of formalization of job responsibilities, no clear division of duties to be performed, fewer policies and rules, higher levels of lateral communication with limited bureaucratic structure and decentralized decision structure (Miller, 1986; Morrand, 1995), and flattening of hierarchical levels (Senior and Fleming, 2006).

The benefits of this are reflected in improved communication because excessive hierarchical levels create barriers to effective communication (Drucker, 1998). As CA has developed over the last four years, a heavy middle management and hierarchical organizational structure has emerged. In their study, Claver-Cortes et al., (2007) found that firms in their research had adopted a flatter more organic structure to help adapting to KM strategy. They argue that this allowed for an improved dialogue between all staff, enhancing interaction and collective learning.

RESEARCH DESIGN AND APPROACH

This study adopted an exploratory approach with the aim of developing an understanding of the research subjects' views surrounding potential issues to KM adoption. The approach taken in researching perceptions related to KM in the case study was similar to the approach taken by Nunes, Ananasingh, Eaglestone, and Wakefield, (2005) in their study of managers perceptions of KM. This research project utilizes two sets of primary data – one from the case and the second from a global KM study (see Coakes, Amar and Granados, 2010) - to permit triangulation. Case data was collected in the

form of semi-structured interviews and observational data. The global online hosted survey was answered by over 900 participants. Hypotheses on the KM management process in contemporary organizations, emphasizing the importance of strategy, cover this work.

As part of direct observation, casual data (Tellis, 1997) collection in the case was used, such as note taking of staff conversations, and a sample population of seven managers was selected for interview. They were selected for their positions, area of operation or expertise - CEO, E-Commerce Manager, General Manager, Customer Services/IT Manager (CSM), Senior Underwriter, HR Manager, and Deputy General Manager (DGM).

Data Analysis

The case study method relies on an analytic strategy (Yin, 2008). The main method of analyzing the transcribed interviews was through content analysis. Using Nvivo software, transcriptions were analyzed and the emergent themes and issues extracted. These were then mapped for easy visual representation, comment and analysis.

In previous knowledge management surveys the authors reported an inductive analysis of the results of 20 interviews with knowledge managers (Bradburn, Coakes, 2004; Bradburn, Coakes and Sugden 2002; Coakes, Bradburn, 2005). The survey results given in this paper draw from, and expand on, the original survey detailed in these papers for the analysis to form the core element. This current survey was designed primarily for deductive analysis as the best fit analysis for a world-wide survey across many nations, cultures, and languages and the survey was programmed onto an online hosting site to reach all levels of knowledge workers and managers. Company size amongst participants ranged from under 50 employees to over 1000, with very diverse participant jobs, ranging from pastoral (employed by the Vatican), food technologist, Clinical Safety Associate, Project Architect, VPs and CEOs, to one participant whose role was to *Preserve, perpetuate and make publicly accessible the legacy of a preeminent American visual artist*.

RESEARCH FINDINGS AND ANALYSIS

A taxonomy was developed and key perceptions of managers at our CA organization mapped through content analysis of related research sources.

Taxonomy of Interview Themes

Figure 1 below shows the key aspects that emerged from the interviews as categorized into two general themes: Knowledge Management and Organizational Structure. Under each theme a second layer of categorization was performed. From the case analysis of interview text, observational data and organizational documents, the key perceptions and interrelationships are then mapped and discussed.

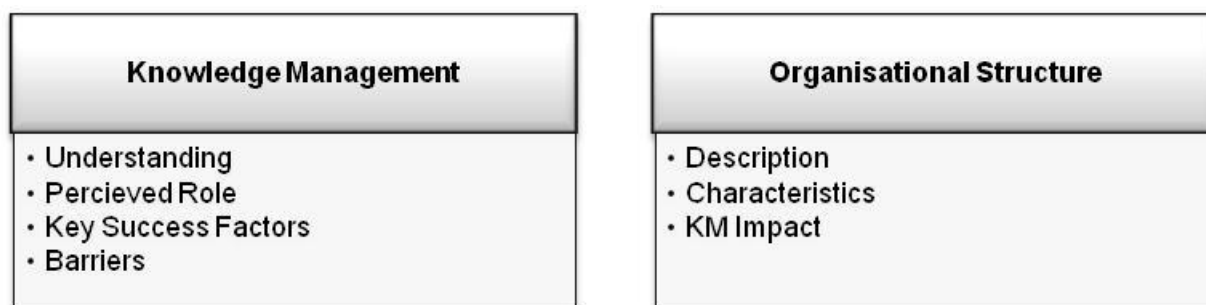


Figure 1: Taxonomy of interview themes

Emergent Themes Relating to Knowledge Management

Understanding of Knowledge Management

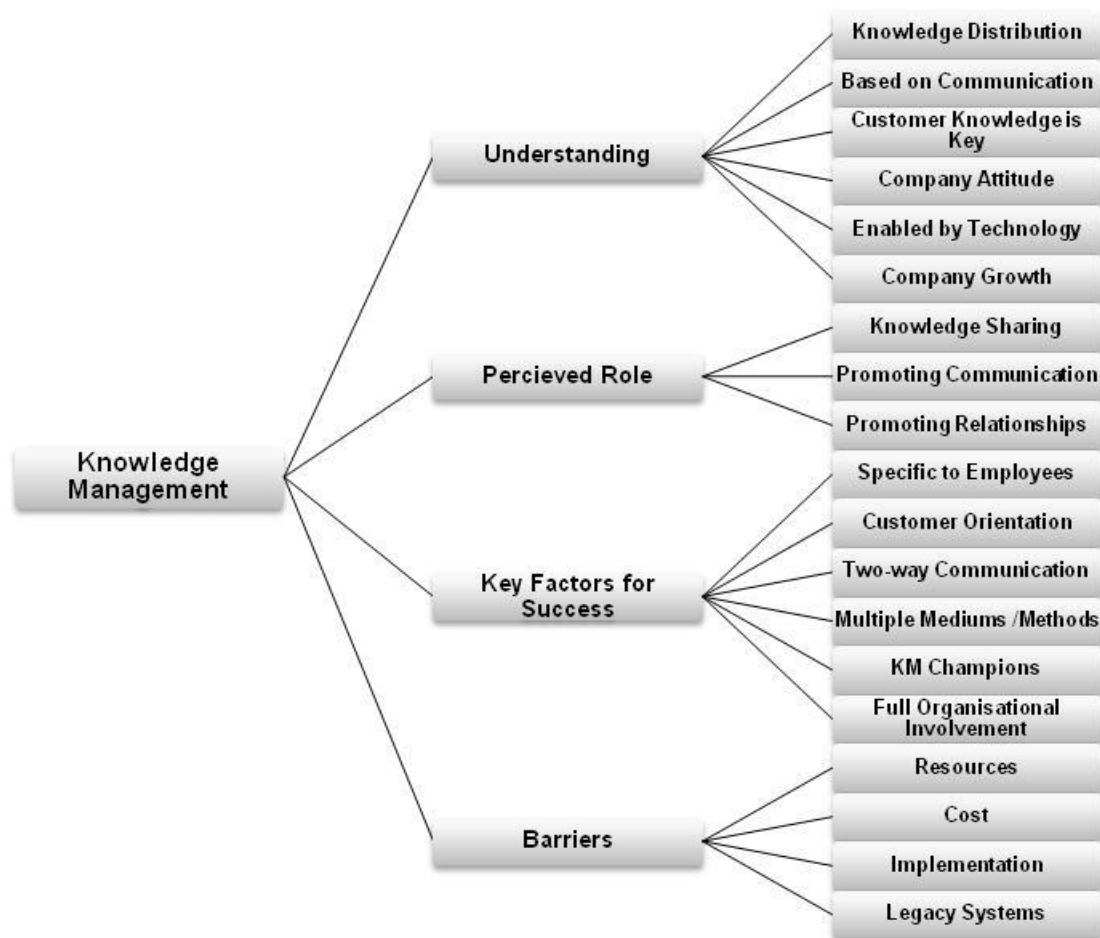


Figure 2: Perceptual map relating to knowledge management

Overwhelmingly managers aligned their perception of KM with knowledge distribution and they associated KM very strongly with communication.

"...if working in a team that needs a lot of communication and sharing of information, like the sales-teams and claims operators who have to meet very often.....one important thing I want them to realize is that communication is one of the most important things in the company. Communicating things to employees and insisting on communication is essential. Internally and externally" (CEO).

Managers often referred to KM as being based on communication. Instinctively many benefits they understood would come from improved communication were the same as the company performance improvement proposed by Davenport (1999) and Skyrme (2009).

The CSM when asked what she believed KM to be said:

"....I think it's about communication.....communication is the hardest thing to get right in any company.....staff want to be talked to, not at" (CSM).

But our survey found:

Some people I work with don't like others to know as much as they do so they are not willing to share their knowledge. They like to be considered important and are afraid they will lose this if others know what they do.

The CEO and General Manager, referred most often to technology as a key enabler of communication. They appreciated the strategic benefits in aiding knowledge-sharing but also saw technology as complimentary to other knowledge-sharing methods.

Our survey showed though that the Intranet was often considered incapable of providing the necessary route to knowledge due to too much data, too much traffic or poor searching capabilities.

The General Manager also referred to productivity as a key benefit that was expected and strongly appreciated the inherent risks of KM such as cost, applicability and implementation.

Unless managers had experience with a KM-system, it was apparent that they related to KM in terms of their individual company roles.

Perceived Role

When discussing KM roles managers linked this with a duty to share their own knowledge to aid employees' development. Only the Senior Underwriter understood that KM was about building organizational knowledge (Alavi and Liedner (2001).

".....transmitting knowledge to building know-how in terms of learning, and transferring that knowledge to headquarters, is big exercise. Transfer of that knowledge to all the members of the team.....it is not one person, it is company knowledge. So that is an exercise we have done systematically and is one of my own objectives" (CSM).

In their roles regarding KM, 'Promoting Communication' featured heavily in the responses of those interviewed. The responses indicate that managers felt it was their responsibility to encourage knowledge-sharing through communication, but often did not make a clear distinction between KM and communication. This suggests the need to educate managers about KM and to help create a common language surrounding KM, (Albers, 2009) when developing the ideal KM culture. Our survey however, showed that there was a lack of *people to act as mentors/trainers*.

Key Success Factors

The primary observation for success from managers' views was that information and interaction with a KM-system must be specific to the employee. A key concern was how to manage the content and flow of information so it was specific. Content management was a key aspect to facilitating the knowledge-sharing process (Gamble and Blackwell, 2001).

"...we need to have a system where we can get information that is accurate, up-to-date and easy to access for our customers and company..." (DGM).

"...while looking for something for their own purposes or for working purposes in a particular area, they may find something interesting to look at in the intranet and find outside information..." (CEO).

Managers also expressed that a success criteria was that communication flowed in both directions. They believed employees would not engage with KM programs if the information flow was top-down. This view supports previous observations that managers do not clearly delineate communication and KM. It also emerged that the intranet should augment and support the existing communication knowledge-transfer strategies, not replace them as supported by Du Plessis (2007).

Staff suggested that the introduction of a Task Management system had an adverse effect on job task efficiency. The Task Manager was designed to make product quoting more efficient and lead times more transparent. Previously, communication would be directly to underwriters when quoting and was quick and easy, although disruptive to their duties. The Task Manager removed direct communication and soon became viewed as a barrier and treated with cynicism. This illustrates that the system was better at reducing disruption to the underwriters but could not replace direct communication as the most efficient method in quoting. Had the system been viewed as part of an overall communication system (Marques and Simon, 2006), this experience may have been avoided.

Barriers

Managers viewed time and resource as main barriers to the success of implementing an intranet system; our survey would agree but add that culture was more important.

"... we need more time and resources to be able to dedicate the time that we are not dedicating to our current day-by-day basis to actually develop this" (DGM).

All managers recognized the need for someone to manage the implementation carefully; only the HR manager considered it her responsibility to develop a plan, although she was unsure if she would have this responsibility.

Emergent themes relating to Knowledge Management and Organizational Structure

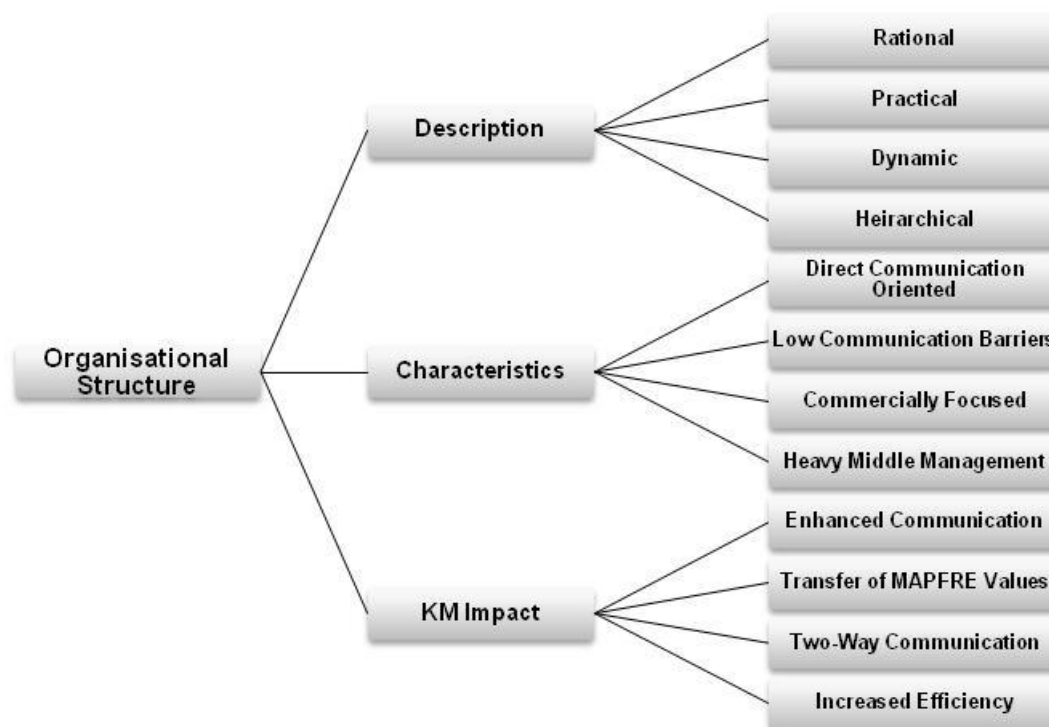


Figure 2: Perceptual map relating to knowledge management and organizational structure

Description

The general consensus regarding the organizational structure was that it was fit for purpose and was highly practical.

Senior managers thought that CA was highly adaptive and could adjust to optimize its performance, despite its hierarchical nature. However, hierarchical structures are often associated with less adaptive organizations (Senior and Fleming, 2006), as flatter, organic structures possess the flexibility to adapt to changing situations (Morrand, 1995). Our survey found that hierarchical structures were strong barriers to communication flow: *Organization wise, it's hard to go vertically, I can only relate easily with co-workers in the horizontal levels.*

Characteristics

A perception from senior managers was that the culture at CA encourages open communication and was a strong promoter of direct or face-to-face communication.

"... [if] we can translate the culture of the company which is an open floor communication, [in a KM-system] that would be great" (CEO).

Concurrently, managers described CA as having a heavy layer of middle-management, some commented that this may lead to slowing communication or processes (Senior and Fleming, 2006) on a KM program.

Knowledge Management Impact

Managers' views on the impact of KM related to the organizational structure were overwhelmingly in favor of it enhancing communication with employees, while recognizing the need for communication in both directions. Only the CEO and General Manager thought the company would adapt its structure to suit KM if needed.

Managers also believed it would be a valuable means in which to transfer the CA's values to staff, so they gain a wider appreciation of the company. Again this perception places emphasis on the flow of communication toward staff and was supported by the goals of the KM-system. Managers support the notion that communication must be two-way but much of the functional focus of this system appears geared toward a dominant direction of communication.

Looking to the results from the global survey that were validated through SPSS analysis, reliability and validity, as well as significance testing (see Coakes et al, 2010) with a Cronbach's Alpha of 0.936, indicating that overall the questions have significant scientific value, we find that the case managers' perceptions are in contradiction to those of knowledge workers. The survey highlighted that to further the realization of a well understood KM strategy organizations devise knowledge management programs that result in people working together in communities of practice with face to face communication. Additionally, making employees work in teams also becomes a means to sharing of knowledge. The analysis additionally indicated that the task of knowledge management has moved from a large, standardized, centralized, and purely technical function to one that is performed by almost all knowledge workers in any organization, small or large. The survey did validate that, to achieve better knowledge sharing, firms utilized their intranets for the exchange of ideas, information, and knowledge. This is an important role of technology in the KM process but for successful KM deployment, firms have to develop a specific technology (such as repositories) for managing collective knowledge. The survey also indicated that soft issues are the predominate factor as to why technology based knowledge management programs are frequently not successful.

CONCLUSIONS

The purpose of this research was to determine the perceptions and understanding of CA's managers in regards to KM and examine if the organizational structure was conducive to a KM program. The main objectives were to determine the perceived benefits; identify the perceived barriers for implementation and identify the perceived requirements to permit KM as practice.

The findings indicate that there was strong support from senior management for the intranet, which was crucial in successful KM initiatives (Lakshman, 2007; Singh, 2008). The main benefits managers reported were improved communication and internal knowledge-sharing.

Managers' views are in-line-with much of the literature regarding success factors for KM implementation (Jennex and Zakharova, 2006; Lakshman, 2008), with staff involvement at all-levels being important (Albers, 2009; Newell, Robertson, Scarbrough, and Swan, 2002).

The study identified not having enough time and resources, as potential barriers to adopting KM. If these requirements are not met, resistance to adoption could occur. The existing IT system was identified as a barrier, as incompatibility with existing systems and job roles may restrict usefulness.

These findings were contrasted with the results from a global survey where human, technical and organizational barriers to knowledge-sharing were investigated. Here the major organizational barriers were considered to be hierarchical, stovepipe and silo structures, and mentality. Additional barriers were considered to be communication - inability to find who had the knowledge, and lack of sufficient time to share, as people were frequently too busy.

The research reveals that the organizational structure was perceived as rational and fit for purpose. The senior management expressed a view that the company was adaptable to change. However, the company was hierarchical in nature and has a strong middle management presence - Senior and Fleming (2006) assert that companies like CA cannot adapt easily. Easy adaptation was commonly associated with flatter more organic organizational structures - hierarchical structures can be a barrier to communication.

Future research is required to follow this case's findings and to discover how valid this misunderstanding is amongst other managers. There is a need to investigate KM failures to discover if managerial perceptions as to what knowledge-sharing is, could be a contributory factor to failures.

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